

Design of Chicken Processing Tools using QFD (Quality Function Deployment) and Anthropometry Approaches to Improve Chicken Halal Integrity

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Abstract. Islamic Sharia requires consumers to consume products that are guaranteed to be halal and pure. Chicken, which is a type of animal that is halal for consumption, can become non-halal if its slaughter and handling do not comply with Islamic law. This research was conducted in several businesses selling broiler chickens in the city of Medan. From initial observations, it can be seen that several production activities can make chicken meat non-halal, especially in the process of stacking chickens in barrels after the slaughter process and before the boiling process. The aim of this research is to design processing tools at chicken slaughterhouses to maintain and improve the halal integrity of chicken meat. The initial design of tools for processing chickens was made based on the results of field observations using QFD and anthropometric approaches. Questionnaires were distributed to obtain product attributes and improvements from the initial design of chicken processing aids. The data from the questionnaire was then tested for validity and reliability and the final design of the chicken processing tool was obtained. Determination of tool size is determined using an anthropometric approach. The working system designed is that after the chicken is slaughtered, the chicken will be put into a chicken processing tool which can accommodate 10 chickens and there are 10 partitions in this tool so that the chicken is not crushed by other chickens. At the end of the chicken processing tool there is a valve that can be opened if the chicken has gone through an inspection process which aims to ensure that all the chickens are dead. Once the chicken is confirmed to be dead, the valve will be opened by sliding the hinge so that the chicken will automatically go straight into the boiling process so as to avoid the chicken dying from exposure to hot water. If chicken processing tools are applied at the chicken slaughterhouse, the chicken produced can be halal.

Keywords: Halal chicken, Quality Function Deployment, Anthropometry, Tool Design.